

**REMARKS**

Favorable reconsideration of this application, as amended, is respectfully requested.

Applicants acknowledge with appreciation the indication of allowable subject matter in Claims 25 and 32.

Without acceding to the rejections, independent Claims 24 and 38 have been amended to include subject matter from Claim 32 and its intervening claim, Claim 31. The dependencies of Claims 33 and 34 have been amended based on the cancellation of Claims 31 and 32. Accordingly, independent Claim 24 (and its dependents) and independent Claim 38 are believed to be in condition for allowance.

New independent Claim 39 has been added and includes features of pre-amended independent Claim 24 and allowable Claim 25. As Claim 39 includes features of allowable Claim 25, it too, is believed to be in condition for allowance.

Regarding independent Claim 1, without acceding to the art-based rejections thereto, Claim 1 has been amended to include features of Claims 17 and 18<sup>1</sup> (both now cancelled), as well as to recite certain distinctive features of Applicants' invention with greater particularity. Support for changes to Claim 1 can be found, for example, in International Application No. PCT/AU96/00197 (WO 96/31627), which has been incorporated by reference into the present application. See, for example, lines 1-2 on page 4 of Applicants' specification. Note also that the foregoing international application designated the U.S. and has U.S. Patents that have matured therefrom.<sup>2</sup>

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<sup>1</sup> Applicants note that Claims 17 and 18 include features similar to those of allowable Claim 32 and intervening Claim 31.

<sup>2</sup> PCT/AU96/00197 has produced U.S. Patent Nos. 6,083,296 and 6,267,799.

A steelmaking process according to independent Claim 1 includes, *inter alia*, producing molten iron in a direct smelting process in a direct smelting vessel containing a molten bath of iron and slag using a substantial portion of the steelmaking slag as part of the feed material requirements for the direct smelting process. Claim 1 also now more particularly sets forth that the direct smelting process includes: using a slag forming agent to provide flux units in addition to the flux units provided by the steelmaking slag, injecting the slag forming agent directly into the direct smelting vessel as opposed to pre-treating the slag forming agent before injection into the vessel as is the case with the steelmaking slag, and injecting solid feed materials through downwardly extending solids injection lances with sufficient momentum to penetrate the molten bath and to cause splashes, droplets, and streams of molten iron and slag to be projected above the surface of the molten bath.

The applied references are not seen to teach or suggest the foregoing combination of features of Claim 1, as now more particularly set forth therein. For example, Vallomy discloses inserting carbon, baghouse dust, and inert gas into the reaction vessel 32. See Vallomy, col. 5, lines 42-49. However, Applicants respectfully assert that Vallomy does not inject the carbon, baghouse dust, and inert gas into the reaction vessel 32 to cause splashes, droplets, and streams of molten metal to be projected above the surface thereof. Nor do such references appear to be properly combinable to achieve Applicants' combination of features as now set forth in Claim 1.

Dependent Claim 10 has been amended for clarity, and dependent Claims 12, 19, 20, and 21 have been amended for consistency. Support for the changes to Claim 10 can be found on page 3, lines 30-34 of Applicants' specification, for example. In amending

Claim 10, the rejection under 35 U.S.C. § 112, second paragraph has been appropriately addressed without acceding thereto.<sup>3</sup>

Accordingly, Claim 1 and its dependents, Claims 2-16 and 19-22 are believed to distinguish patentably from the applied references and are allowable.

Finally, independent Claim 23, which was previously withdrawn as being directed to non-elected subject matter, has been cancelled without prejudice or disclaimer.

In view of the foregoing, this application is believed to be in condition for allowance.

A Notice of Allowance is respectfully solicited.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 (T2211-11786US01) any fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has not been separately requested, such extension is hereby requested.

Respectfully submitted,

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<sup>3</sup> Applicants presume the rejection under 35 U.S.C. § 112, second paragraph was intended to be directed only to Claim 10 and not Claim 11.